

### **REMARKS**

The Office Action mailed July 6, 2007, has been received and the Examiner's comments carefully reviewed. In the present response, claims 37-38 have been amended to incorporate "wherein the physical interface detects a data rate of the data signal", as described, for example, on pages 10-11 of the present application. Claim 38 has been amended to independent form; support for this amendment is present in the original application, at least in originally presented claim 37. No new matter has been added, and claims 1-45 are pending. Favorable consideration of this application is requested in view of the following remarks.

#### ***Claim Rejections - 35 USC § 112***

In the Office Action, claims 38-45 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant respectfully traverses this rejection.

In the present response, Applicant has rewritten claim 38 in independent form, as suggested by the Examiner. Applicant asserts that, although the scope of the claim has not changed, claim 38 as currently presented is explicitly not indefinite. Applicant therefore respectfully requests reconsideration and withdrawal of this rejection.

Similarly, claims 39-45 depend from claim 38, and are not independently indefinite. Applicant respectfully requests reconsideration and withdrawal of the rejection of these claims as well.

#### ***Claim Rejections - 35 USC § 102***

In the Office Action, claims 1-9 and 11-17 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Overs et al. (U.S. Patent No. 6,600,755). Applicant respectfully traverses this rejection.

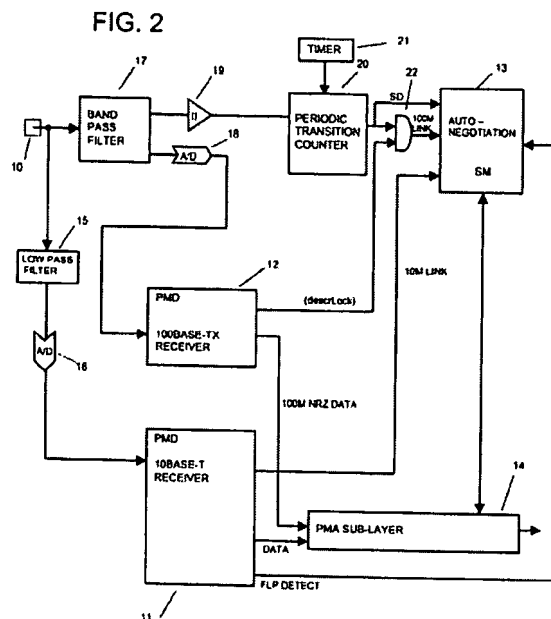
##### **A. Independent claims 1 and 11**

Applicant notes that independent claims 1 and 11 require, among other elements, "selecting a source from amongst the plurality of potential sources" and "monitoring the selected

source for an indication of communication speed.” Applicant asserts that Overs et al. fails to disclose selecting a source from amongst a plurality of potential sources or monitoring the selected source for an indication of communication speed.

As an initial matter, Applicants note that, as described in the application, a source refers to a wired pair or other potential input conduit. This is illustrated, for example, in Figure 3 of the application, in which two potential wired pairs 302 and 304 are considered, and one of which is assigned to be a source (i.e. input). As discussed in the example on page 10, lines 9-14 of the application, one of the wired pairs is associated with an input port of a physical interface, while the other is not. The present application describes searching for incoming communication from a source (from a plurality of sources), and secondarily determining the speed of that communication. *See, e.g.*, Figure 2 of the application.

Overs et al., on the other hand, describes an auto-negotiation process in which two receivers are associated with a single port, with each receiver associated with a given data rate. *See, e.g.*, Overs et al., claim 7. This is particularly noticeable in Figure 2 of Overs et al.:



In this figure, a 10Base-T and a 100Base-T receiver (11 and 12, respectively) are both coupled to an input and are selected between using the auto-negotiation module (13) shown. Although Overs et al. acknowledges two different data rates, it fails to disclose two different sources.

Therefore, Overs et al. cannot be said to select from among a plurality of sources, or monitor each source for an indication of communication speed (monitoring each source referring to the iterative process present in the claim). Because Overs et al at least lacks these elements, Applicant asserts that Overs et al does not anticipate claims 1 and 11. Therefore Applicants respectfully request reconsideration and withdrawal of the rejection of these claims.

**B. Dependent claims 2-9 and 12-17**

Regarding the dependent claims, claims 2-9 depend from claim 1, and inherit all of the limitations therefrom. Claims 12-17 depend from claim 11, and inherit all of the limitations of that claim. Applicant therefore asserts that these claims also require “selecting a source from amongst the plurality of potential sources”, and are not anticipated by Overs et al. for at least the same reasons as discussed above with respect to claims 1 and 11. Applicant therefore respectfully requests reconsideration and withdrawal of the rejection of these claims as well.

***Claim Rejections - 35 USC § 103***

**A. Claims 37-45**

In the Office Action, claims 37-45 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoseph in view of Medina (U.S. Patent No. 6,203,333 B1). Applicant respectfully traverses this rejection.

**1. Independent claims 37-38**

Applicants note that independent claims 37-38 each require, as currently presented, “a switch having a first end and a second end, the first end capable of coupling to any of a plurality of potential sources of a data signal, the second end coupled to an input port of a physical interface.” The claims further require, among other elements, “an optical transceiver coupled to the physical interface” and “wherein the physical interface detects a data rate of the data signal.” Applicants assert that the combination of Yoseph and Medina et al. fails to disclose or suggest the combination of elements claimed.

As an initial matter, Applicants note that, as claimed, a switch is coupled as an intermediary between a physical interface and a data signal source, with a first end of the switch capable of coupling to a plurality of potential sources, and the second end coupling to the physical interface. Applicants observe that the layout of the switch, physical interface and optical transceiver is seen in Figure 3, in that a switch 312 connects between a source (e.g. lines 302 or 304) and a physical interface 314, which then connects to an optical transceiver 320:

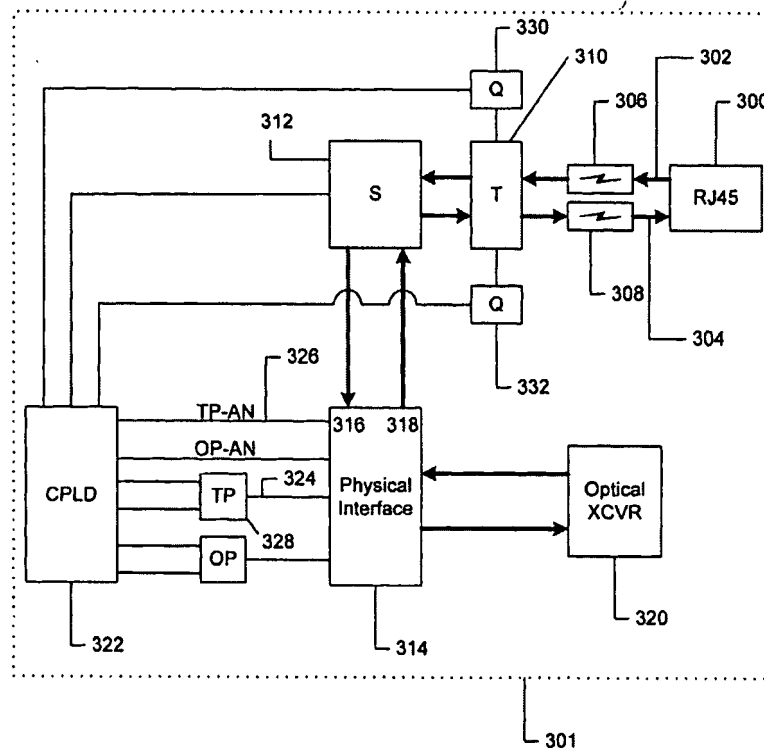
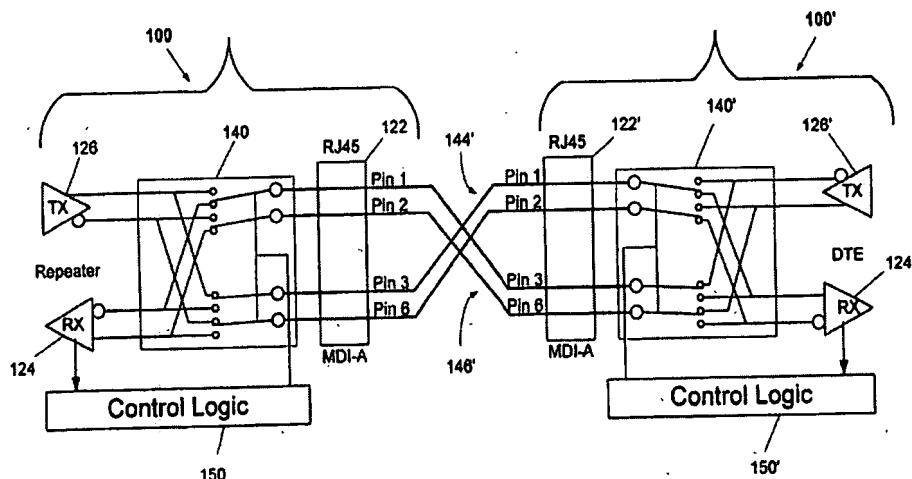


FIG. 3

The combination of Yoseph and Medina et al. does not disclose or suggest the combination of elements claimed. First, Yoseph discloses a switch controlled by logic for switching lines in an ethernet network, as seen in Figure 3C of that patent application:



**FIG. 3C**

Yoseph discloses that the physical interface (MDI) reside at the RJ-45 interface, causing the switch to be located on the opposite side of the physical interface as is claimed and illustrated in the present application, i.e. a “switch having a first end and a second end, the first end capable of coupling to any of a plurality of potential sources of a data signal, the second end coupled to an input port of a physical interface.” Therefore, for the purposes of the rejection, the “input port” of the claim is in fact connected the *outward* bound signal from the transmitter 126 toward the RJ-45 connector. This does not match the language of claims 37-38 claim, and therefore is not properly applied to reject those claims. For at least this reason, the combination of Yoseph and Medina et al. should not render obvious claims 37-38.

Secondly, even if such a configuration made sense within the context of Yoseph, Medina et al. and Yoseph, when combined, would form a system which teaches away from the claimed invention. Yoseph does not disclose any connection of an optical interface with a physical interface. Medina et al. discloses a pluggable module that converts between electrical and optical transmission protocols. However, Medina et al is configured to be connected externally between an electrical and an optical device, and does not disclose any specific connection to a physical interface. Applicants note that combining Medina et al. with the system of Yoseph in the orientation claimed (on the opposite side of the physical interface from the switch) would result in connecting an optical transceiver on the external side (connecting between the two RJ-

45 connectors 122, 122', respectively) of the RJ-45 interface, rendering the physical interface translation meaningless due to subsequent optical transmission. Because the systems of Yoseph and Medina et al. would render each other redundant in such a system, these references should not be combined. For this additional reason, the combination of Yoseph and Medina et al. should not render obvious claims 37-38.

Third, neither Yoseph nor Medina et al. discloses that the physical interface “detects a data rate of the data signal.” Yoseph does not include any discussion of detecting data rates, and Medina et al. describes a connector useable in connecting systems at a predetermined rate (*Gigabit* Interface Converter, as discussed in the summary of the invention). Applicants therefore assert that the combination of Yoseph and Medina therefore cannot render claims 37 or 38 obvious for at least the additional reason that neither reference discloses or suggests detecting data rate of a data signal.

## **2. Dependent claims 39-45**

Claims 39-45 depend from claim 38, and as such inherit all of the limitations of that claim. Applicant notes that these claims are not rendered obvious for at least the same reasons as set forth above with respect to that claim, and respectfully requests reconsideration and withdrawal of the rejection of these claims as well.

## **B. Dependent claims 10 and 18**

In the Office Action, claims 10 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Overs et al. in view of the IEEE standard 802.3 (2002) and Pickell (U.S. Publication No. 2004/0153701 A1). Applicant respectfully traverses the rejection.

Claim 10 depends from claim 1; claim 18 depends from claim 11. These claims each require “selecting a source from amongst the plurality of potential sources”, and “monitoring the selected source for an indication of communication speed.” These claims are not obvious over Overs et al. in view of the IEEE standard 802.3 and Pickell. Applicant observes that, as previously discussed with respect to claims 1 and 11, Overs et al. fails to disclose “selecting a source from amongst the plurality of potential sources” and “monitoring the selected source for an indication of communication speed.” Applicant further asserts that neither the IEEE 802.3

standard nor Pickell discloses performing these elements of the independent claims. Because the combination of references does not disclose or suggest each of the elements of the independent claims, Applicants assert that the references cannot render obvious either of claims 10 or 18. Applicants therefore respectfully request reconsideration and withdrawal of the rejections of claims 10 and 18.

**C. Claims 19-26**

In the Office Action, claims 19-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoseph in view of Overs et al. Applicant respectfully traverses the rejection.

Applicant notes that independent claim 19, from which claims 20-26 depend, includes requirements of “a switch interposed between the data jack and the physical interface” and “using the switch to alternately couple the input port on the physical interface between a first pair of pins on the data jack and a second pair of pins on the data jack.” Applicant asserts that the combination of Yoseph in view of Overs et al. fails to teach or suggest at least these portions of the claim.

First, neither Yoseph nor Overs et al. teaches a switch interposed between the data jack and the physical interface. Yoseph discloses that the switch is located between a physical interface and a transmitter-receiver pair (seen in Figure 3C of Yoseph, above). The switch is not located between a data jack and a physical interface, in that the two are disclosed as unitary in Yoseph. Overs et al. fails to disclose a switch altogether. Therefore, this element is entirely absent from the asserted references.

Second, neither Yoseph nor Overs et al. teaches using the switch to alternately couple the input port on the physical interface between a first pair of pins on the data jack and a second pair of pins on a data jack. The switch in Yoseph does not change pin assignments between the MDI interface and the RJ-45 jack; rather, it changes pin assignments between a transmitter-receiver and the MDI. Overs et al. again does not include a switch which performs this function, so cannot remedy the deficiencies of Yoseph in its application to the claim.

For at least the above reasons, Applicants assert that the combination of Yoseph and Overs et al. does not teach or suggest each of the elements of claim 19. Applicants therefore

respectfully request reconsideration and withdrawal of the rejection of that claim. Because claims 20-26 each depend from claim 19, Applicant notes that at least the same elements are necessarily lacking from those claims, and respectfully requests reconsideration and withdrawal of the rejection of those claims as well.

**D. Claims 27-35**

In the Office Action, claims 27-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoseph in view Overs et al. and Medina et al. Applicant respectfully traverses the rejection.

**1. Claim 27**

Applicant notes that independent claim 27, as currently presented, requires “a logic device coupled to the physical interface.” That logic device must be arranged to perform a number of actions, including “receiv[ing] a signal from the physical interface, the signal communicating a data rate at which the data signal will be communicated.” Applicant notes that none of Yoseph, Overs et al., and Medina et al. discloses a logic device coupled to a physical interface that communicates a speed at which a data signal is communicated.

The combination of Yoseph, Overs et al. and Medina et al. fails to disclose or suggest the combination of elements of claim 27. Yoseph discloses a crossover system that includes a physical interface (e.g. MDI) that is directly connected at an RJ-45 connection interface. This crossover system is seen, for example, in Fig. 3C of Yoseph (shown above). As is apparent in the above diagram, Yoseph discloses no coupling or other interconnection between control logic (150, 150') and the MDI interface (122, 122'). Instead, the control logic receives a signal from a receiver which indicates that a connection has been established. Yoseph, p. 8. Further, there is no indication that Yoseph discloses receiving a signal from the physical interface into a logic device which communicates data rates. Overs et al., as discussed above with respect to claims 1 and 11, discusses selecting from a plurality of data rates, but not from a plurality of sources; there is no indication that there is a physical interface which transmits that signal. Furthermore, Medina et al. merely discloses an optical to electrical converter module, as previously discussed with respect to claims 37-38. It does not disclose detecting a data rate at a physical interface.



Medina et al. also does not discuss (nor do any of the other references) incorporation of an optical transceiver into the media converter of the claim, nor does it provide any motivation to do so.

For at least this reason, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 27.

## **2. Claims 28-35**

Claims 28-35 depend from claim 27 and inherit all of the limitations from that claim. Applicant therefore asserts that the combination of Yoseph, Overs et al., and Medina et al. does not render these claims obvious as well. Applicant respectfully requests reconsideration and withdrawal of the rejection of these claims.

### **E. Dependent claim 36**

In the Office Action, claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoseph, Overs and Medina, as applied to claim 27, in view of Nagase et al. (U.S. Publication No. 2002/0130650). Applicant respectfully traverses the rejection.

Applicant notes that claim 36 adds the element that “the signal communicating a data rate at which the data signal will be communicated is a two-bit digital signal derived from a tri-state signal provided by the physical interface.” The Examiner asserts that Nagase et al. discloses this element, and when combined with the other prior art references applied to claim 27, this claim is rendered obvious. Applicant disagrees. Without regard to the specific teachings of Nagase et al., it is clear that Nagase fails to at least disclose or suggest the elements discussed as lacking from claim 27, as discussed above. Applicant therefore states that claim 36 is not rendered obvious for at least the same reasons as set forth in claim 27. Applicant therefore respectfully requests reconsideration and withdrawal of the rejection of this claim as well.


**Conclusion**

It is respectfully submitted that each of the presently pending claims is in condition for allowance and notification to that effect is requested. Although certain arguments regarding patentability are set forth herein, there may be other arguments and reasons why the claimed invention is patentably distinct. Applicant reserves the right to raise these arguments in the future. The Examiner is invited to contact Applicant's representative at the below-listed telephone number if it is believed that the prosecution of this application may be assisted thereby.

Respectfully submitted,

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